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CHATSWORTH

Report of the Railroad and Warehouse Board on the Great Calamity

An Exhaustive Review of the Events Leading up to the Terrible Catastrophe

Summary of the Testimony Taken in the Case -- The Precautions Taken

The Running of "Double-Headers" Declared to be of Questionable Propriety.

A Tribute to the Dead Engineer, McClintock--Sutherland Slightly Censured.

The Management of the Road Blamed for Not Properly Patrolling the Track.

Recommendation of the Board -- Large Excursion Trains Should be Divided--Wooden Bridges and Culverts Should be Replaced with Stone as Soon as Possible

THE CHATSWORTH CALAMITY.

REPORT OF THE RAILROAD AND WAREHOUSE COMMISSIONERS.

Springfield, Dec. 9. - [Special.] -

The Railroad and Warehouse Commissioners this morning placed their report of the Chatsworth disaster before the Governor. It is as follows:

The Hon. Richard J. Oglesby, Governor of Illinois: A statute was enacted at the last session of the General Assembly of Illinois which makes it "the duty of the Board of Railroad and Warehouse Commissioners to investigate the cause of any accident on any railroad resulting in the loss of life or injury to person or persons which in their judgment, shall require investigation to be reported upon in a special report to the Governor as soon after said accident as may be practicable, and in their annual report." Therefore, in compliance with the statute, an din discharge of the duty so imposed,, the undersigned respectfully submit the following report upon the accident that occurred on the line of the Toledo, Peoria & Western railway near Chatsworth, Ill., on the night of the 10th of August, 1887:

On the morning of the 11th of August, 1887, the members of the Board of Railroad and Warehouse Commission, while in session at Springfield, were informed that during the night of the 10th a terrible accident had happened to a large excursion passenger train on the Toledo, Peoria & Western Railway just east of Chatsworth, in Livingston County, Illinois, in which it was said a large number of person had been killed, and a still larger

number seriously wounded and a large number of cars destroyed. As soon as we could do so we proceeded to the scene of the wrecked train, at which we arrived at about noon of the 12th, for the purpose of investigating the cause of the accident. We made a personal examination of the railroad track near the wreck, the bridge where it occurred, as well as the wreck itself.

We found that the track of the railroad, at and near the west end of the bridge had not been disturbed. At the east end of the bridge the track had been torn up to some extent by the engine and the cars that had been destroyed and wrecked. The bridge had been almost entirely consumed by fire. Nine cars and one locomotive engine had been wrecked. The wrecked engine and cars had all passed over the bridge and the dry branch which it spanned, and lay east of the bridge, the locomotive about 200 feet from the bridge, and the cars between it and the bridge. First the baggage car, next to the superintendent's car, which also carried a few passengers when wrecked, next five day coaches and two chair cars. Four of the passenger cars had telescoped as they stopped, and the floors of them lay one on top of the other, the superstructures having been destroyed, or cut off and dashed into pieces.

When we arrived there we found that all of the dead and wounded had been removed from the wreck, and none of either the dead or wounded were there at that time. None of the cars had been burned, nor had any fire caught in the wrecked cars at all. No person nor any human body was burned in the wreck. The debris was not burned up until after we had made our examination of it.

After having made such personal examination, we proceeded to further investigate the accident--to learn the cause thereof by taking the testimony of a large number of witnesses whose relation to the accident enabled them to give information upon the subject.

1. We examined Mr. Sutherland, the surviving engineer, who had charge of the front engine drawing the train at the time of the accident.

2. Mr. Rogers and Mr. Applegreen, the firemen on the two engines which drew the train.

3. Mr. Armstrong, the general superintendent of the Toledo, Peoria & Western Railway, and who was with the train when the accident occurred.

4. The station agents and telegraph operators at Chatsworth and Piper City, who were on duty at those stations on the Toledo, Peoria & Western Railway on the evening of and at the time of the accident.

5. The train dispatchers who were on duty as such at the time the train started from Peoria, and until it was wrecked.

6. A number of gentlemen who were passengers on the train when the accident occurred. These men resided--some at Peoria, Chatsworth, Piper City, and along the line of the railway near to the scene of the wreck, and between Chatsworth and Piper City.

7. A number of prominent railroad officials who are men of wide and long experience in the management of railroads doing business in Illinois and other states, and some of whom at present have the management of some of the principal railroads operated in this state. Among them were E. T. Jeffery, general manager of the Illinois Central Railroad; H. B. Stone, general manager of the Chicago, Burlington and Quincy railway, and Edward St. John, general manager of the Chicago, Rock Island and Pacific railway.

The evidence so taken and printed, a copy of which is herewith submitted:

The evidence of all the witnesses were taken at open public meetings held for the purpose at Chatsworth, Piper City, Peoria, at the point of the Toledo, Peoria & Western railway where the accident happened, and at Springfield. There were present at such meetings and when the evidence was taken, newspaper reporters, officials of the Toledo, Peoria & Western and other railroads, city officers of Peoria, county officers of Peoria County, attorneys of the railway company and State's Attorney of Peoria County. (The two latter being allowed to take part in the examination of witnesses so called and examined.)

From the evidence taken we find the facts to be: That the train to which the accident happened was composed of fifteen cars, drawn by two engines--one No. 13, a passenger engine thirty-four tons weight, hitched next to the train and equipped with air-brakes and under the charge and management of Mr. McClintock, an experienced, skillful and careful engineer, and who was accustomed to running passenger trains and well acquainted with the use of Westinghouse air brakes. The other engine, No. 21, was placed in front, and the movements of the train in running, stopping, and starting were under the control of Mr. Sutherland, a freight engineer, with very slight experience in running passenger trains. Engine No. 21 was placed in front, and the movements of the train in running, stopping, and starting were under the control of Mr. Sutherland, except when he may have been signaled by the engineer on the rear engine. The cars composing the train so drawn, were, first and next to the engine & baggage car; next, the superintendent's car, which carried a few passengers; next, five ordinary passenger coaches; next, two chair cars, and next and last six Pullman sleeping cars, which were placed in the train from the front to the rear thereof in the order named. The engines and cars were all carefully inspected at Peoria before starting by the employees of the railway company to whom such duty is regularly assigned, and each car and engine was found to be apparently in good condition and in working order.

The engine next to the car composing the train and all of the cars were equipped with the Westinghouse air brakes. The cars were coupled together with the Miller coupling, all of which couplings were apparently in good order. The air brakes were tested before the train started from the depot and were found to be in good order to work well.

The train was an excursion train made up to run from Peoria, Illinois, to Niagara Falls, New York, and return, and was to be run by the Toledo, Peoria & Western Railway Company over its line of railway from Peoria east to the Illinois State line, a distance of 111 miles.

The train started from Peoria at 7:45 P.M. on the 10th of August, 1887. It was to have started at 7:15, but was thirty minutes late in getting started. It was drawn across the railroad bridge of the Illinois River by engine No. 13, and there engine No. 21 was attached. The train was only to stop at stations where there were passengers going on the excursion to be taken on, and it had the exclusive right of way--all other trains were side tracked for it. The train was to be, and was, run on a time card which was made and delivered to each engineer and the conductor by the train dispatcher at Peoria before the train started.

The track was stated by witnesses to have been in good condition. The evidence showed that the general superintendent had directed that the brakes should be set on all cars on the side tracks along the line, and that the switches should be locked before the train started from Peoria, and to remain locked until after the train had passed, and that such order had been communicated to the station agents along the line and obeyed by them. The evidence also shows that the general superintendent had directed the Roadmaster and his subordinates to cause the entire track to be examined by the section hands, to see that the bridges were in no danger of fire, and that duty was to be performed on the evening of the 10th of August the last thing before quitting time. The evidence shows that this order was communicated to the Roadmaster, Ennis, and to the section boss on each section on the line of railway. The evidence also shows that this order was complied with by all of the section bosses and their men at just before 8 o'clock p.m. of the 10th, except that on the section under Tim Coughlin, whose section included Chatsworth and the bridge where the accident to the train happened. Coughlin and his men did not, nor did any of them on that day go over that part of the section which is west of Chatsworth; but on that part of the section nothing happened and no harm came from the omission so to do. The evidence shows, however, that Coughlin and his men did go over and examine all the rest of the track and the bridges on his section.

The evidence also shows that the bridges, including the one where the accident happened, were sound and in good condition.

The stations on the line of railway each had a telegraph office and telegraph operator on duty, and each station was in telegraphic communication with the principal office at Peoria, where are the headquarters of the railway company. Such were the conditions under which the ill-fated train started from Peoria. It moved out in apparent good condition in every aspect.

When at Weston the draw-bar connecting one of the passenger coaches was pulled out or broken and that car had to be set out of the train. At Forrest, another car was obtained from the Wabash Railway Company and placed in the train. This car was equipped with the Westinghouse air brake, and when placed in the train the brakes were again tested and were found to be in good order. The train again moved on its way, stopping only where passengers were to be taken on. The last stop before the accident was at Chatsworth, where the train arrived at 11:30 p.m., and departed at 11:42 p.m., an hour and fifty minutes behind time, distance seventy miles. The train ran, excluding stops, at the rate of about thirty-two miles an hour.

The ground from Chatsworth to Piper City, the next station east of there, is a succession of grades and depressions, each lower than the other until the bridge is reached, at which the accident happened, where the ground is thirty-seven feet lower than at Chatsworth--distance two and one half miles. After leaving this depression the ground gradually rises until at Piper City it is ten feet higher than at the bridge--distance two miles. The line of railway between those two places is nearly exactly straight. The profile put into evidence shows the elevations and depressions above mentioned.

The evidence of Engineer Sutherland and his fireman who served on his engine No. 21, say that when within 300 feet of the small bridge or trestle which spans the little drain at the point of greatest depression mentioned above, they saw the fie which they then believed to be on the track, and in fact on the bridge. The fireman, Mr. Rovers, says that he saw a light of a fire on the side of the railway apparently fifteen feet from the track, when the train was within 200 yards of the bridge, but that it did not attract his attention particularly, such sights not being very uncommon; but that when within 60 feet was impressed with the danger of his situation, and (the fireman) leaped from the train. The engineer remained on his engine, first shut off the steam, and in an instant afterwards as he was crossing the bridge let on the whole of the steam and succeeded in crossing the bridge.

He says that he felt it give away under his engine, but that the force of the full head of steam carried it over the chasm spanned by the bridge. As he went across the bridge he saw that it was then covered with fire which appeared as embers.

The fireman, Mr. Armstrong, the superintendent, and a number of passengers who were aboard the sleepers, all say that the bridge was burning and nearly consumed when they reached it.

The sleeping cars stopped (all but one) west of the bridge, while the forward sleeper stopped with its forward end just beyond the east end of the bridge, and that rested on the rear end of the wrecked cars in it front, its front trucks dropped into the chasm, while the body of the car extended across the bridge, the rear end remaining on the rails, the track there being in place.

Sutherland's engine in crossing broke loose from its tender and from the rear engine, and ran eastward on the track about a quarter of a mile and was stopped by him. The second engine and nine cars crossed the bridge and were derailed, and the engine fell upon its side to the right of the rack; the baggage car was thrown against the engine to the right of the track and was wrecked; the Superintendent's car was thrown across the track and at right angles to it, and was also a total wreck; the seven passenger coaches telescoped as they stopped, and lay to the right of the track and between the superintendent's car and the east end of the bridge.

The evidence shows that the steel rails extended across the opening spanned by the bridge, and that the engines and nine cars that were wrecked did not leave the rails until after they had crossed the bridge.

The rails were bent by the weight of the engines and the cars, the bridge timbers having been so much burned that they offered no support to the rails. The engines and cars broke their couplings as they successively, crossed the depression resulting from the burned bridge and the bent rails, but were driven forward by their own momentum and that of the cars behind them, and were derailed and telescoped just beyond the bridge as above stated.

The evidence shows beyond question that the immediate and sole cause of the accident was the burning of the bridge. Had that bridge not been burned, it is evident that the train would have passed in safety.

The bridge that was burned was a very small structure and spanned a mere depression in the almost level prairie. There was no water in that depression at the time, and never is except immediately after a rain. The whole opening beneath the so-called bridge was only thirteen feet in length by six feet in height.

The construction of the bridge was as follows:

1. There were two rows of piling parallel with the channel and placed thirteen feet apart on opposite sides of the channel, there being four pilings in each row placed four feet apart, and driven in the ground from ten to twelve feet, and standing out and above the ground about five feet.

2. On top of each row of piling was a cap or log 1 foot square.

3. On these were stringers, 15 feet in length, each consisting of two pine timbers 7x16 inches bolted together with a piece of wood 1 inch thick between them at the point where bolted, thus allowing the air to pass between them. On the stringers were the cross-ties on which the steel rails were laid.

All of the wood composing the bridge was white oak with the exception of the stringers and guard rails.

There were old ties and the stringers of a former bridge, which at the time were laid outside of and against the piling of this bridge so as to hold the earth of the embankment at each end of the bridge from falling into the channel. They constituted bulkheads for that purpose and were considerably decayed.

Such was the bridge, the burning of which was the sole cause of the accident which caused the instant death of seventy persons and wounded 100 in addition. (Since the accident thirteen more have died of their injuries.)

ORIGIN OF THE FIRE

There is no evidence tending to prove that the fire was the work of an incendiary.

The evidence does not clearly show what was the origin of the fire that burned the bridge, whether it caught from sparks blown from grass said to have been burned north and west of the bridge on that afternoon of the 10th of August, or from sparks or cinders thrown or dropped from the engine of the freight train that crossed the bridge about 4 o'clock p.m. of the 10th. The probability is that sparks or cinders from the engine had caught in the bed ties and stringers which were used as bulk-heads to hold the earth of the embankment at the ends of the bridge, and was smoldering for some time before it was fanned into flames, and it might not have been observed by the section hands when they were at the bridge at 5:45 p.m. on the day of the accident.

The question that has often been asked and still arises is, was any person guilty of negligence contributing to produce the accident? Was the railway company upon whose line of road the accident occurred guilty of negligence that rendered such a calamity possible?

The most surprising fact in the case is that neither the engineer or fireman saw the fire at the bridge, nor light of it until within 300 feet of it. They swear they did not, and there is no evidence to contradict them. Indeed it is consistent with reason to accept their statements as true, for if we decline to do so, we must conclude that they deliberately rushed into what they must have believed was certain death to them. There is nothing in the evidence to justify the belief that they would have done so. They say the fire was smoldering embers, did not give off light, and was not observed until very near to it. That is possible, notwithstanding that for hours before the light had been seen and discussed by many persons at Chatsworth and Piper City, and along the line of the railway on both sides of it between these places. The evidence of those persons who saw and discussed the fire all shows that towards 11 o'clock p.m. there was less light than there had been for some hours before, and that it had become more dim.

The logs of the bridge may have become covered with coals, and they with ashes, and so when not fanned by a strong breeze the fire in that condition would emit but little light.

This is a supposition, it is true, but still it is far more probably than to assume that the engineers and firemen would rush into the fire of a burning bridge and into the very jaws of death, regardless of the danger to themselves and to the passengers on the train.

The evidence of the engineer who survived the accident and who was upon the front engine says that when he saw the fire he did not sound the whistle or give any signal to set the brakes and did not reverse his engine. He says he shut off steam, and when he reached he bridge let it all on again, and did so to save his life. He seems to have been so dazed and terrified by he apprehension of his own personal peril and of the responsibility of his position by the fact that the lives of the passengers were in his charge, that he was not capable at the moment of acting with that degree of good judgment that the emergency required. Perhaps had he applied the steam brake to his engine or reversed the engine it would not have averted the accident.

The evidence tends to show that the train could not have been stopped within 300 feet--not short of 400 to 450 feet, yet it was the opinion of some of the experts who were examined that the effort should nevertheless have been made when the fire was first seen. Engineer Sutherland says he failed to make any such effort. The evidence shows, however that he shut off seam for a moment at least. That seems to have attracted the attention of the engineer on the engine next to the train, for the evidence of Superintendent Armstrong is that the air brakes were set by McClintock, the engineer who was killed in the accident. The act of McClintock's ended to limit the extent of the calamity. This is evident from the fact that the Pullman sleepers stopped on and west of the bridge, remained on the rails, and suffered no injury whatever.

So much should be said in justice of the man who seems to have done what he could to prevent disaster to the train.

DOUBLE-HEADERS

The train was long, heavy, and carried a large number of passengers, was running at a high rate of speed, and was drawn by two engines--a double-header, (when there was nothing to make it necessary to use more than the ordinary amount of power to draw a train of reasonable size.) This in the light of all the evidence in the case was of questionable propriety.

It may be said that a single engine and a lighter train would be exposed to the same peril. That may be true; but when an accident does happen to the larger train drawn by two locomotives equally high rate of speed with the lighter train drawn by the single engine, the destructive effect of derailment or contact with obstruction encountered, is inevitably greater to the heavier train than to the lighter one, because of the increased momentum and consequent force of the concussion, and of the fact that a greater number of persons are exposed to a common danger. The greater force, the equal speed and double weight of the train must produce far greater injury to train and passengers, than to a lighter train with half the force at the same speed.

PATROLLING TRACK BEFORE TRAINS

This accident would not have happened had the track been patrolled by reliable and prudent men just before the ill-fated train passed over the railway on the night of the 10th of August.

While the evidence shows that the superintendent ordered the track to be carefully examined by the section bosses and hands to see that no fire was about the bridges the last thing before quitting work on the 10th, and that the order was obeyed, yet that examination was made more than five hours before the train arrived on the section where the accident happened. The section hands all thought that whatever fire may have been near the bridge on the afternoon of the accident was not in danger of setting fire to the bridge, and they left it suspecting the bridge was entirely safe.

The managers of well regulating railroads during cold weather when the rails are full of frost, send men to walk the track between stations before the passage of each train, to look for broken rails and so to prevent accidents from this cause.

There would need to be an equal necessity for the like precautions in dry weather along lines of railroads with wooden bridges and culverts and trestle work constituting part of the track.

We think it is the duty of all railroad corporations, however well managed their railroads may be in other respects, to send reliable men to examine their railroad tracks immediately before the passage thereon of every train carrying passengers that traverses their line of road. A proper regard for the safety of the persons they undertake to transport over their roads would seem to require the exercise of that precaution.

The law requires railroad corporations, and all others engaged in operating railroads on which the passengers are transported, to use a very high degree of care and diligence to provide for the safely of persons whom they carry as passengers over their lines of road.

To meet and properly discharge this obligation, no expense of money, no degree of vigilance, no effort consistent with the continued operation of the road should be omitted. The railroad track should be strong, sound, and able; the engines in good order and skillfully handed, and properly equipped for controlling the stopping, as well as the drawing of the train; the cars strong and properly equipped with brakes, all in good order.

If there be on the line of the railroad, and constituting a part of its track, wooden bridges, wooden culverts or trestle work, such structures should be carefully protected from destruction by fires, and during extreme drought if not under the care of permanent guards, hen such wooden structures should be examined by vigilant and reliable patrol immediately before the crossing thereon of a train carrying passengers.

It may be said that the expense of such precautions would be too great for the resources of the corporation to sustain. No such excuse can be allowed.

Railroad corporations must adequately provide for the security of the persons they undertake to transport as passengers upon their lines of road. This they must do before making lavish expenditures for richly upholstered and expensively furnished passenger coaches. The latter need only be done when the income from the traffic of the road warrants it; the former, the corporations should make, or they should forfeit their charter. Every person being carried as a passenger is entitled of right to be carried in safety.

A railroad company is not compelled to build stone culverts or iron bridges, or to make earth embankments. But when it exercises its privilege of building wooden culverts, wooden bridges and trestle works then it must at its peril so guard such structures that they shall not take fire and burn, or it must patrol its line of road whereon such wood structures are, that no accident shall from that cause befall the passengers transported over its railroad.

We think the Toledo, Peoria & Western Railway Company was at fault for having omitted to cause the line of its railway to be carefully patrolled on the night of the 10th of August last, immediately before the passage of the Niagara excursion train, to see that there was no fire at the wooden bridges and culverts and trestle work over which that train had to pass. The weather was, and had for a considerable time been extremely dry, and fires had been of very common occurrence along the lines of the railroads in that part of the country.

We are aware that it has been shown that other generally well managed railroads were not at that time accustomed to use that special precaution, but it is only their good fortune to have escaped like disaster from the neglect of the same plain duty they owed under similar circumstances to the persons whose lives they had in their keep while transporting them over their lines of road.

We think it was an error on the part of the railroad company to have placed the freight engine in front of the passenger engine in drawing this excursion train, thus placing the train practically under the control of a freight engineer unaccustomed to the responsibility of running a passenger train.

In view of the facts elicited in this investigation, we make the following recommendations:

1. That when large trains of passenger cars carrying a great number of persons, as in the case of excursions, are to be run over any line of railroad, that the railroad shall divide such train and run the same in sections or blocks, and that each section be drawn by a single engine. And in order that such sections shall not be in danger from each other, there should be one station between the sections while running.

2. That when double-headers are used, that each engine be equipped with air brakes and properly connected with the train, and each car to be equipped in like manner, and that

such engines be placed in charge of engineers of known coolness, experience, and skill and who are accustomed to running passenger trains.

3. That the track of their lines of railroad over which passenger trains are run should, during extremely dry weather, be examined by men employed especially for that purpose, who shall pass over the track just before every train passes that carries passengers.

4. That small wooden bridges, wooden culverts and short lines of trestle work be replaces as soon as practicable with stone and iron structures and earth embankments. We recommend this as to small bridges, culverts, and short lines of trestle work, because they are not usually guarded with that degree of care that large bridges and long lines of trestle work are guarded. The Chatsworth accident shows that an insignificantly small bridge is capable of causing, as that did, very great destruction of human life, as well as of property of great value.

John I. Rimaker,
B. F. Marsh,
Jason Rogers,

Commissioners.